

4

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/092,136	DER HAAR, THOMAS VON5	
	<b>Examiner</b>	<b>Art Unit</b>	
	Allen C. Ho	2882	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on 25 November 2003.
2. ☒ The allowed claim(s) is/are 1-7,9,10,12 and 14-17.
3. ☒ The drawings filed on 01 July 2002 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                       |
| 2. <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                                 | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance              |
|   | 9. <input type="checkbox"/> Other _____.  |

### **EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Steven H. Noll (Reg. No. 28,982) on 25 July 2004.

The application has been amended as follows:

- (1) Claim 1, line 11, -- areas,-- has been inserted after "intermediate".
- (2) Claim 7, line 2, "scintillator" has been deleted.
- (3) Claim 7, line 4, "area" has been replaced by --areas--.

### ***Allowable Subject Matter***

2. Claims 1-7, 9, 10, 12, and 14-17 are allowed over the prior art.
3. The following is an examiner's statement of reasons for allowance:

With respect to claims 1-7 and 9, although the prior art discloses an x-ray detector comprising a plurality of individual sensor elements including an x-ray sensitive scintillator element and a photo-electrical transducer, and adjacent sensor elements are separated by intermediate areas, it fails to teach or fairly suggest that scintillator material is disposed in the intermediate areas such that the mathematical product of the height of the scintillator material in the intermediate area and the x-ray absorption coefficient of the scintillator material has a value in range between 0.15 and 0.50 as claimed.

With respect to claim 10, although the prior art discloses a two-dimensional x-ray detector comprising a plurality of individual sensor elements including an x-ray sensitive scintillator element and a photo-electrical transducer, adjacent scintillator elements being separated by intermediate areas, it fails to teach or fairly suggest that scintillator material is disposed in at least some of the intermediate areas between adjacent scintillator elements in the rows, with respective intermediate areas between adjacent columns of the sensor elements being free of the scintillator material as claimed.

With respect to claim 12, although the prior art discloses a computed tomography apparatus comprising a two-dimensional detector comprising a plurality of individual sensor elements, each sensor element including an x-ray sensitive scintillator element and a photo-electrical transducer, adjacent scintillator elements being separated by intermediate areas, it fails to teach or fairly suggest that scintillator material is disposed in the intermediate areas between adjacent scintillator elements in the rows, with respective intermediate areas between adjacent columns of the sensor elements being free of the scintillator material as claimed.

With respect to claims 14-17, although the prior art discloses a method for manufacturing a detector for detecting x-rays comprising the steps of providing a layer of scintillator material, selectively removing scintillator material from the layer to produce a plurality of separating channels, the separating channels extending only partly through the layer to form a portion of respective intermediate areas between adjacent sensor elements, it fails to teach or fairly suggest filling at least some of the intermediate areas with scintillator material such that the product of the height of the scintillator material in the intermediate area and the x-ray absorption coefficient of the scintillator material is in a range between 0.15 and 0.50 as claimed.

Art Unit: 2882

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen C. Ho whose telephone number is (571) 272-2491. The examiner can normally be reached on Monday - Friday from 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward J. Glick can be reached at (571) 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Allen C. Ho  
Patent Examiner  
Art Unit 2882